

Title (en)

Computer control providing single-cycle branching.

Title (de)

Rechnersteuerung mit Verzweigung in einem einzigen Zyklus.

Title (fr)

Commande de calculateur avec branchement en un cycle.

Publication

EP 0219203 B1 19950215 (EN)

Application

EP 86306269 A 19860814

Priority

US 77132785 A 19850830

Abstract (en)

[origin: EP0219203A2] An instruction processor suitable for use in a reduced instruction-set computer employing an instruction pipeline which performs conditional branching in a single processor cycle. The processor treats a branch condition as a normal instruction operand rather than a special case within a separate condition code register. The condition bit and the branch target address determine which instruction is to be fetched, the branch not taking effect until the next-following instruction is executed. In this manner, no replacement of the instruction which physically follows the branch instruction in the pipeline need be made, and the branch occurs within the single cycle of the pipeline allocated to it. A simple circuit implements this delayed-branch method. A computer incorporating the processor readily executes special-handling techniques for calls on subroutines, interrupts and traps.

IPC 1-7

G06F 9/38

IPC 8 full level

G06F 9/32 (2006.01); **G06F 9/38** (2006.01); **G06F 9/48** (2006.01)

CPC (source: EP US)

G06F 9/30058 (2013.01 - EP US); **G06F 9/3842** (2013.01 - EP US)

Cited by

EP0463977A3; US5961637A; EP0324952A3; US5237664A; US7047399B2

Designated contracting state (EPC)

AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)

EP 0219203 A2 19870422; **EP 0219203 A3 19890719**; **EP 0219203 B1 19950215**; AT E118628 T1 19950315; DE 3650232 D1 19950323; DE 3650232 T2 19950810; JP 2640454 B2 19970813; JP 2796797 B2 19980910; JP H09171463 A 19970630; JP S6254342 A 19870310; US 4777587 A 19881011

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EP 86306269 A 19860814; AT 86306269 T 19860814; DE 3650232 T 19860814; JP 20356986 A 19860828; JP 28379296 A 19961025; US 77132785 A 19850830